SPECIFICATIONS AND GENERAL CONDITIONS OF CONTRACT TO ACCOMPANY THE DESIGN FOR CANOPY AT MYSORE.

Dated 2nd April 1918.

Sealed tenders will be received in the office of the Architectural Executive Engineer, Mysore, on or before the 1st of August 1918 for all items of work as noted in the schedule hereto appended, including labour and materials required for the erection and completion of Canopy over the Statue of His Highness Sri Chamaraja Wodayar Bahadur, situated in the Curzon Park in the City of Mysore.

2. The time required for completing the work should be specified by the contractor and will be considered as an important condition in accepting the tenders which rest with the Chief Engineer who does not bind himself to accept any or the lowest tenders or to assign any reason for the same.

3. The surety required unless specially exempted by the Chief Engineer, will be Rs. 10,000 which will be deposited in the Bank of Mysore (at a fixed deposit for the period specified for the completion of the contract), in the name of the Chief Engineer. This amount should be paid in within 6 weeks after the date of acceptance of the successful tender.

4. If the work to be done under this contract shall be abandoned by the contractor, or if this contract shall be assigned, or the work sublet by him, or if at any time the Chief Engineer is of opinion that the performance of the contract is unnecessarily or unreasonably delayed, or the contractor is wilfully violating any of the conditions or covenants in the contract or specifications, or is executing the same not in accordance with the terms thereof, the Chief Engineer shall notify the contractor to discontinue all work and shall have power to contract for the completion in any manner prescribed by the rules of Mysore Public Works Department and in that case, the contractor shall forfeit the surety deposit of Rs. 10,000 noted above.

5. The payment for the work shall be made as the work progresses and on bills submitted by the contractor for completed portions of construction or for materials received at site of work.

6. The contractor shall place proper guards for the prevention of accidents and shall pay promptly and in cash for all labour employed upon and the materials furnished and used in the work. The work shall be done and managed by, and at the cost of, the contractor so as not to violate any law or ordinance in force in Mysore City.

7. *Payments when made.*—The contractor shall not be entitled to demand or receive payment for any portion of the work executed or materials supplied, unless the same shall be fully completed in the manner set forth in this specification.

8. *General Conditions.*—The plans and general drawings and estimates of quantities are herewith sent for information and guidance. These quantities noted in the schedule are only approximate and are taken out so as to give a fair idea of the quantity and nature of the work to be done.

9. The contractor whose tender is accepted should submit detail working drawings for the approval of the Chief Engineer before actually commencing work. The detail drawings shall in each case govern in preference to what the general drawings may show for the same work. Any work constructed without these drawings and details, or not in accordance therewith, shall be removed and replaced at the contractor's expense.

10. All the materials required to erect the Canopy as shown on the plans, details and specifications shall be the best of their respective kinds. Samples of all materials shall be submitted to the Chief Engineer for his approval.

11. *Workmanship.*—All workmanship shall be of the best and none but skilled mechanics in various trades shall be employed on the work.

12. *Improper materials and labour.*—Any material or workmanship which is not up to the standard of the specifications shall be removed and replaced by the contractor at his own expense.

13. The contractor shall be responsible for any damage done to the building during its construction; the Chief Engineer shall not also be responsible for loss from any unusual obstructions or difficulties which may be encountered during the progress of the work.

14. *Guarantee.*—The contractor shall guarantee his work for a period of one year from the date of acceptance of the building and shall at his own expense make good all defects which may appear or develop therein during this period to the satisfaction of the Chief Engineer. An amount equal to $2\frac{1}{2}$ per cent of the amount of the contract shall be retained by the Chief Engineer out of the final payment for this period of one year, as security of the faithful performance of the guarantee.

15. *Tools, etc.*—The contractor shall furnish all labour, tools, implements, scaffolding, centerings, templates, derricks, and machinery and appliances and power necessary or required for the satisfactory completion, in the best and most thorough manner all of the work specified herein.

16. *Cement.*—Cement used for pointing the exposed marble work shall be of nonstaining quality, "Blanc" or Lafarge cement and shall be tested, and briquttes seven days old must stand a test of 200 lbs., per square inch, when mixed with sand 1 : 3.

17. *Model.*—The contractor shall furnish full size models for all carvings shown on the drawings.

18. *Work to be done.*—This contract intends the erection and completion of the Canopy, (over the Statue of His Highness Sri Chamarajendra Wodayar Bahadur) as shown in these accompanying drawings and described in these specifications and includes, (1) the carting of the Statue from the verandah of Jaganmohan Palace where it is now kept and placing of the same in position, (2) all demolition of the existing work where necessary, (3) excavating, (4) stone masonry as core, (5) steel and iron work for framing, (6) carpentry work, (7) copper steel metal work for Dome, (8) marble work for all exposed portions, (9) flooring, (10) ceiling, and (11) painting and all other works incidental or in addition thereto as herein specified or necessary or required for the completion of the said Canopy.

All the above items of work should be done in the best and workmanlike manner so as to meet with the approval of the Chief Engineer.

19. *Stone Masonry.*—For the platform and alround the plinth of the Canopy, stone masonry should be used as backing while all face work will be of marble. The stone work done should be as per approved samples put up and should conform to the specifications of the Public Works Department, and to the standard of work done at the Mysore Palace for the basement.

20. *Steel and Iron work.*—For the superstructure of the Canopy, it is proposed to use steel frame work as the core for the marble face work which will be veneered on to the steel frame by suitable dowels and cramps as hereinafter specified. All structural steel as shown in the drawings shall be of open hearth or Bessemer medium steel of quality to meet the following requirement:—

Ultimate tensile strength 60,000 lbs., per square inch.
Elastic limit not less than 30,000 lbs., do
Minium elongation in 8" 20 per cent.
To bend cold 180° around a curve diameter equal to the thickness of the test piece.

21. Rivets wherever used shall be $\frac{3}{4}$" or $\frac{7}{8}$" in diameter generally and machine driven where practicable. Pitch shall not be less than 3" diameter, not more than 6" and shall be not less than $1\frac{1}{4}$" from edge of plate. Rivet holes shall be punched not more than 1/16" larger than the diameter of the revet and shall be spaced accurately. All wrought iron work shall be of the best quality suitable for the purpose intended and shall be tough fibrous and of even texture.

22. The four columns of the Canopy superstructure shall be built of steel as shown on the drawings with four plates, (enclosing four square bars) well riveted together and made in one length with bearings for the beams and a base plate for each column. Bases shall be of cast steel, all top and bottom bearings shall be truly squared at right angles to the axis of the columns. The four columns shall be firmly braced together both diagonally and crosswise in the portion buried in the masonry.

23. *Framing.*—The contractor shall furnish and erect all structural steel work as shown or implied in the drawings and framing plans, together with all work incidental thereto as required for the proper construction, and veneering of marble slabs.

24. All beams should be riveted to girders and girders to columns the connections to be web connections in every case. The Carnegie or Dorman Long & Co's. R. S. J. shall be used as the type.

25. Trusses for the dome shall be constructed as shown in the framing drawings, with rivetted connections and shall be anchored properly to the beam below.

26. *Painting.*—All metal work shall be painted one coat of (red lead) paint before it is sent out of the shop and after erection a second coat shall be applied of any graphite or noncorrosive paint.

27. *Sheet metal work.*—The whole of the main dome and the four corner kiosks with finials, etc., complete, shall be of sheet copper. The copper sheet work of the Dome shall be done in the most careful manner to insure perfectly water tight connections with proper allowance for expansion and contraction. All sheet metal shall be executed in 40 oz., (or 1/16" thick) soft rolled copper and all joints shall be locked, trimmed and soldered.

28. The contractor shall flash the junction of the Dome with masonry with flashings extending on the flat not less than 12″ into the water proofing concrete of the flat roof.

29. All exposed metal of Dome shall be highly polished and ready to be gilt by the gold-leaf-mercury process.

30. *Marble work.*—Marble shall be used for all visible portions of the Canopy (including the platform, parapet wall, steps, the plinth, the columns, the ceiling below the Dome and also the Lovey cornice and the top parapet wall). For the platform, marble blocks of suitable size may be used as face work over the backing of local stone masonry, care being taken to secure perfect bond between the marble facing and the stone backing.

The steps shall be of 2″ thick slabs and the parapet wall adjoining steps and platform shall be of solid marble with pierced jalli work for the panels.

The flooring of the platform shall be of white marble with black marble borders and inlays as shown in the drawings.

The plinth below the Canopy Mantapam shall be constructed of solid masonry so as to take the load of the statue marble being used for face work and flooring only. The flooring may be of slabs 1½″ thick, white for face work including cornice marble blocks of suitable size shall be used, so as to ensure a substantial structure, details regarding the sizes of the various blocks should be stated by the contractors in their tender.

The four columns shall be built of marble slabs whose minimum thickness shall not be less than 2″, these slabs to be securely fastened on, to the steel frame work of the columns by proper brass dowels and bolts. All hollows in the portions between the marble and steel core shall be filled in with good cement concrete.

The interior ceiling above the Statue and below the Dome shall be built of solid marble of sufficient thickness and in suitable sizes as shown in the drawings, the blocks being attached to the steel frame work wherever necessary by clamps and bolts of suitable sizes.

31. The heavy Lovey cornice and the parapet wall shall be composed of marble slabs of suitable thickness and in as few pieces as possible.

32. Generally the whole of the marble work shall be done with the minimum number of blocks and slabs consistent with economy and strength, the object being to finish the Canopy so as to appear as a monumental structure with no visible masonry joints.

33. The contractor shall furnish and set all marble work required for the Canopy as per details shown in the drawings accompanying his tender and approved by the Chief Engineer. He shall provide all templates forms, etc., and shall be responsible for the proper fitting of his work in place in all its details.

34. He shall also furnish setting materials such as stone aggregate for concrete, cement, plaster of Paris, lime, etc., required in setting the marble work and also all brass (copper) anchore, clamps, dowels, pins, etc., necessary to secure the marble in place. All setting shall be done in the best and most workmanlike manner; there shall be no exposed metal connections which must all be countersunk in marble to a suitable depth and the surface finished off with a nicely fitted surface veneering piece.

35. The contractor shall do all cutting, drilling and fitting of marble to accommodate the work of Electric Lighting the interior of the Canopy and shall make good after its completion leaving the work in a satisfactory condition.

36. The contractor shall provide all board protections required by the Chief Engineer in connection with the work damaged during the progress of the building leaving the work in perfect order.

37. All marble shall be of the best quality free from spots, streaks or other imperfections and, unless otherwise specially permitted, shall be white carrara marble or (C. F. Italian marble) with such exposed surfaces highly polished and others honed finish as may be decided by the Chief Engineer during execution, and all treads and risers of steps be highly polished.

38. The contractor shall furnish and set all marble treads for steps 2″ thick with moulded nosings. The treads shall be in slabs cut to the curve as shown on the plan and in lengths not less than 6 feet, and be secured to the masonry below by brass dowels as hereinbefore stated.

39. All veneered slabs shall be properly grooved wherever adjoining slabs have to be joined on, and all slabs shall be properly doweled wherever possible and anchored together in the best manner possible, the minimum thickness of the veneered slabs being not less than 1½″ excluding all ornamental carvings.

40. All marble shall be set in non-straining cement mortar and pointed with Keene's cement thoroughly filling all joints and shall be anchored by brass anchors or dowels as required, to properly and strongly secure same in position.

41. In submitting the tenders, the contractors should specify definite rates wherever possible for the various items of work noted in the schedule hereto appended; but if they prefer to submit a lump sum quotation, such quotation must be accompanied by a set of detailed drawings and specifications fully describing the nature and quantity of work quoted for.

SCHEDULE.

No.	Items of work	Per	Quantity
1	Earthwork excavation and carving	C. yd.	332
2	Excavating the existing earth ram and carting	"	776
3	Concrete in mortar	S. ft.	3,090
4	Size stone in mortar	"	11,509
5	Burnt stone slabs 6" thick 2 line dressed fine at top and face	"	5,316
6	Italian marble for steps including honing and polishing	C. ft.	597·20
7	Italian marble flooring with slab 1½" thick including border and polishing ...	Sq.	21 56
8	Italian marble stone work pedestals and parapet	C. ft.	2,3 0 66
9	Top cornice course	"	60·44
10	Intermediate course	"	63·18
11	Bottom course	"	116·18
	Canopy main structure.		
12	Pillars base	"	54·17
13	Tapering base	"	40·00
14	Straight portion	"	22·82
15	Cornice moulder	"	4·15
16	Base block	"	7·08
17	Shafts	"	36·97
18	Capitals	"	5·50
19	Top piece	"	4·58
20	Top capitals	"	16·50
21	Growing pieces	"	28·11
22	Brackets	"	238·96
23	The rectangular panelling of the boxing alround the girders	"	159·60
24	Interior cornice above beam	"	233·33
25	Do octogonal	"	129·82
26	Interior cornice sixteen sided course	"	40·88
27	Base of dome circular course	"	86·25
28	Do intermediate course	"	88·88
29	Do cornice top course	"	85·25
30	Blocking course over lovey	"	108·25
31	Intermediate slabs of pedestals of parapet	"	105·12
32	Coping slabs of pedestals of parapet	"	...
33	Corner finial over pedestals of parapet base portions	"	94·76
34	Intermediate finials over parapet	"	51·68
35	Ceiling slabs below lovey	"	99·75
36	Horizontal beam course below lovey	"	56·92
37	Pendants below lovey	"	21·75
38	Pendants below interior cornice	"	3·28
39	Interior ceiling dome	"	284·61
40	Small brackets at ends of beam below lovey	"	11·25
	Total ...		4,744·78
41	Italian marble slabs 1" thick over lovey	S. ft.	714·00
42	Italian marble flooring 1½" thick over cement concrete bed between parapet and Dome.	"	·87
43	Armoured cement concrete work	C. ft.	541·87
44	Shell lime plaster panelling below lovey with mouldings	Sq.	2·78
45	Teakwood work including fixing with counter sunk bolts	C. ft.	277
46	Wrought iron frame work including bolts, nuts, etc., completed, fitted up in position.	Cwt.	322
47	Copper dome and finials burned and fitted in position.—		
	(a) Cost of copper	Seer.	5,210
	(b) Cost of sickling and smoothing the above fit for gilding ...	"	5,210
	(c) Labour charges for preparing copper sheets to required shape ...	"	5,210
48	Brass screws with heads gilt for fixing copper sheets of dome	Lump	sum.
49	Bolting of veneered slabs including necessary boring tools	Lump	sum.
50	Removing the existing cam and stone dressed slabs of top and cornice and refitting the same with necessary alterations.	C. ft.	541·90
51	Dismantling and carting the old walls where necessary	"	588
52	Lion figures over pedestals	No.	8
53	Lamp posts with Electrical fittings...	"	8
54	Centering scaffolding and other incidental charges	Lump	sum.
55	Laying out the garden in the space between the parapet of steps ...	No.	4

S. H. LAKSHMINARASAPPA
Archl. Executive Engineer.

KRISHNARAJASAGARA WORKS.

Notice is hereby given that sealed tenders will be received up to 5 P. M. on the 16th May 1918, for the supply of the undermentioned articles for the use of North and South Banks of the Krishnarajasagara Works, from 1st June 1918 to 31st December 1918.

2. The approximate estimate of quantities is given against each item in the list.

3. Tenders should be submitted in the printed forms, which may be obtained from the undersigned's office, and it should be accompanied by a list, in the form given below, showing the rates for the different items tendered.